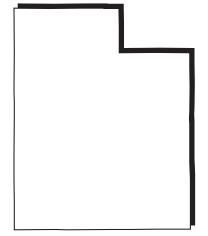


ALGEBRA AND TRIGONOMETRY

SEVENTH EDITION

textbook alignment to the

Utah Core Curriculum Algebra 2





Textbook Alignment to the Utah Core – Algebra 2

This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (<u>www.schools.utah.gov/curr/imc/indvendor.html</u> .) Yes <u>X</u> No
Name of Company and Individual Conducting Alignment: McDougal Littell and McHugh & Associates, Inc. Jessica Mandell
A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):
_ On record with the USOE.
$\underline{\mathbf{X}}$ The "Credential Sheet" is attached to this alignment.
Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Algebra 2 Core Curriculum
Title: Algebra and Trigonometry ISBN#: SE: 978-0-618-64321-9
Publisher: McDougal Littell
Overall percentage of coverage in the Student Edition (SE) and Teacher Edition (TE) of the Utah State Core Curriculum:
Overall percentage of coverage in ancillary materials of the Utah Core Curriculum:%

Percentage of coverage in the <i>student and teacher edition</i> for Standard I:%		Percentage of coverage not in stude the ancillary material for Standard		covered in
Овјес	ctives & Indicators	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
Objective 1.1: Evaluate, analyze, and solve mathematical situations using algebraic properties and symbols.				
a.	Solve and graph first-degree absolute value equations of a single variable.	141 (#65-66), 167 (#111-112), 169 (#16), 258 (#27-28)		
b.	Solve radical equations of a single variable, including those with extraneous roots.	135 (Example 4), 140 (#29-44, 53- 56), 142 (#96-98, 100c, 101c), 167 (#99-102, 115), 169 (#11), 188 (#137-138), 258 (#26), 862 (#81)		
c.	Solve absolute value and compound inequalities of a single variable.	147-148, 149 (Example 6), 150 (#37-44), 151 (#45-60), 152 (#97, 101a, 102a, 103-105), 153 (#106-109, 110c), 168 (#125-131), 169 (#13), 259 (#31-32), 324 (#83-84), 353 (#99-100), 680 (#77-78), 772 (#77-78)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in <i>Ancillary Material</i> (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries
d.	Add, subtract, multiply, and divide rational expressions and solve rational equations.	43-44, 48 (#35-42), 49 (#43-54), 71 (#81-84), 73 (#11, 16), 92, 95 (#33-34, 36, 45-60, 91-92), 109 (#103-104), 143 (#117-120), 169 (#9), 202 (#109-112), 232 (#75- 82), 258 (#5), 470 (#81-84), 543 (#117-120), 834 (#133-138), 862 (#82), 875 (#65-70)		
e.	Simplify algebraic expressions involving negative and rational exponents.	13 (Example 2), 20 (Example 15a-15b, 15d-15f), 21 (#31b, 32b), 22 (#33-34, 35b, 36b), 23 (#95-98), 46, 49 (#67-68), 71 (#49-50), 72 (#101-102), 73 (#6b-6c, 7b), 109 (#101), 258 (#1), 411 (#103-106)		

Овјес	ctives & Indicators	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
Objec	tive 1.2: Solve systems of equations and inequalities.	658-668, 669-680, 681-694, 705-		
		709, 710 (#35-38), 711 (#39-54,		
		65-71), 712 (#72-78), 723 (#67-		
		68), 725 (#1-26, 31-32), 726 (#33-		
		44, 45a, 46-47), 727 (#48, 65-76),		
		729 (#1-10, 15-17, 19-21), 731		
		(#6-10), 732 (#11, 14-17), 739-		
		742, 746 (#51-80), 747 (#82-88,		
		89a, 90a), 748 (#91a, 92a), 763		
		(#91-94), 769, 771 (#53-70), 772		
		(#71, 72b), 782-783, 790 (#1-14),		
		792 (#58b, 63-66), 794 (#15-28),		
		795 (#29-30), 797 (#83-94), 798		
		(#107-110), 799 (#3, 7, 11-12, 15),		
		802 (#13-14)		
a.	Solve systems of linear, absolute value, and quadratic	658-661, 663-664, 665 (#5-7, 11),		
	equations algebraically and graphically.	666 (#15-27, 29-32, 35-38, 49-50,		
		53, 61, 63-65), 667 (#66-68, 69c,		
		70b, 71c-71d), 668 (#72b-72c, 73-		
		78), 669-680, 681-694, 723 (#67-		
		68), 725 (#1-4, 8-12, 15-26, 31-		
		32), 726 (#33-44, 45a, 46-47), 727		
		(#48), 729 (#1, 3-5, 7-10, 20), 731		
		(#6-10), 732 (#11, 14-15, 16b,		
		17b), 739-742, 746 (#51-80), 747		
		(#82-88, 89a, 90a), 748 (#91a,		
		92a), 763 (#91-94), 769, 771 (#53-		
		70), 772 (#71, 72b), 782-783, 790		
		(#1-14), 792 (#58b, 63-66), 794		
		(#15-28), 795 (#29-30), 797 (#83-		
		94), 799 (#3, 7, 11-12, 15), 802		
		(#13-14)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
b.	Graph the solutions of systems of linear, absolute value, and quadratic inequalities on the coordinate plane.	705-709, 710 (#35-38), 711 (#39-44, 47-48, 50, 65-71), 712 (#72-74, 75b, 76b, 77, 78b), 727 (#65-71, 73, 74b, 75-76), 729 (#15-16), 732 (#15, 16b, 17b), 780 (#101-102), 875 (#71-74), 882 (#5-6)		
c.	Solve application problems involving systems of equations and inequalities.	660, 663-664, 666 (#61-65), 667 (#66-71), 668 (#72), 675-676, 678 (#43-51), 679 (#52-56, 63), 680 (#64), 687, 688 (Example 9), 691 (#51-60), 692 (#61-66), 693 (#71-74), 708-709, 711 (#65-71), 712 (#72-78), 725 (#15-16, 31-32), 726 (#45-47), 727 (#48, 73-76), 729 (#19), 731 (#6-10), 732 (#15-17), 747 (#82, 85-86, 89-90), 748 (#91-92), 769, 771 (#67-70), 772 (#71-72), 780 (#101-102), 792 (#58), 799 (#15), 802 (#13-14)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
Objective 1.3: Represent and compute fluently with complex numbers.		126-132, 167 (#77-94), 169 (#17- 18), 312 (#129-132), 550 (#61-64), 632-642, 646 (#97-114), 648 (#20- 24), 694 (#91-96)		
a.	Simplify numerical expressions, including those with rational exponents.	127-129, 131 (#17-58), 132 (#75-82, 84-86), 167 (#81-90), 169 (#17-18), 312 (#129-132), 550 (#61-64), 635-636, 641 (#47-66, 71-88), 646 (#105-110), 648 (#22-23), 694 (#91-96)		
b.	Simplify expressions involving complex numbers and express them in standard form, $a + bi$.	127-129, 131 (#17-58), 132 (#75-82, 84-86), 167 (#81-90), 169 (#17-18), 312 (#129-132), 550 (#61-64), 635-636, 641 (#71-88), 646 (#107-110), 648 (#22-23), 694 (#91-96)		

Овје	ctives & Indicators	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
_	tive 1.4: Model and solve quadratic equations and alities.	110-125, 143 (#121-122), 155, 159, 161 (#9-20, 34), 162 (#61-64,		
		67b, 68b, 69-72), 163 (#74b, 76), 167 (#65-74, 75a, 76c), 168 (#133-		
		136, 145), 168 (#133-136, 145), 169 (#8, 15), 188 (#135-136), 251		
		(#95-104), 258 (#17-22), 288 (#109-116), 297 (#87-92), 411		
		(#107-108), 550 (#65-68), 763 (#85-86), 875 (#61-62)		
a.	Model real-world situations using quadratic equations.	116-117, 119, 121 (#109b, 110), 122 (#111-117, 118a), 123 (#123, 124a), 124 (#133), 125 (#134), 153 (#121), 167 (#76a), 443 (#39b)		
b.	Approximate the real solutions of quadratic equations graphically.	111 (Technology), 118 (Technology), 121 (#51-58), 124 (#131b)		

Овје	ctives & Indicators	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in <i>Ancillary</i> <i>Material</i> (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
c.	Solve quadratic equations of a single variable over the set of complex numbers by factoring, completing the square, and using the quadratic formula.	110, 112-116, 118, 119 (Writing About Mathematics), 120 (#7-20, 35-44), 121 (#67-108, 109c, 110), 122 (#111-114, 115a, 116c, 117c, 118c-118d), 123 (#119b, 120b, 121-123, 124b, 125-126), 124 (#127-130, 131b, 132a, 133), 125 (#134a), 167 (#65-74, 75a, 76c), 143 (#121-122), 153 (#121), 169 (#8), 188 (#135-136), 251 (#95-104), 258 (#17-22), 288 (#109-116), 297 (#87-92), 411 (#107-108), 550 (#65-68), 763 (#85-86)		
d.	Solve quadratic inequalities of a single variable.	155, 159, 161 (#9-20, 34), 162 (#61-64, 67b, 68b, 69-72), 163 (#74b, 76), 168 (#133-136, 145), 169 (#15), 259 (#33-34), 680 (#79-80)		
e.	Write a quadratic equation when given the solutions of the equation.	125 (#141-146)		

STANDARD II: Students will understand and represent functions and analyze function behavior.				
Percentage of coverage in the student and teacher edition for Standard II:%		Percentage of coverage not in stud the <i>ancillary material</i> for Standard	· · · · · · · · · · · · · · · · · · ·	
Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries
Objective 2.1: Represent mathematical situations using relations.		Found throughout text. See, for example: 174-188, 189-202, 215-222, 223-232, 264-274, 275-288, 313-324, 336-344, 384-394, 395-404		
a.	Model real-world relationships with functions.	181-182, 185 (#98c), 186 (#105- 113), 187 (#114-119), 188 (#120), 194, 195 (Example 8), 200 (#89- 94), 201 (#95-101), 202 (#102), 221 (#61-65), 222 (#66-68), 231 (#67), 232 (#68), 253 (#32), 254 (#49-50, 52), 272 (#75-81), 273 (#82-87), 313-324, 339 (Example 4), 340 (Example 5), 343 (#41- 48), 344 (#49-50), 391 (Example 9), 401 (Example 11)		
b.	Describe a pattern using function notation.	194 (Example 6), 199 (#87-88), 200 (#89c-90c, 91), 201 (#96a, 97- 98, 99a, 101b), 215, 220 (#1-8), 254 (#50b, 51a, 52a), 259 (#48a), 268 (Example 4), 271 (#43-52), 272 (#75d)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
c.	Determine when a relation is a function.	190, 197 (#1-10), 198 (#11, 13- 24), 254 (#33-38)		
d.	Determine the domain and range of relations.	193, 199 (#57-70), 203 (Example 1), 210 (#1-4), 221 (#51c, 52c), 254 (#43-48), 257 (#6-7), 336, 341 (#5-12), 342 (#25-32), 346, 350 (#13a-36a), 351 (#37a-62a, 63-66), 376 (#1-4, 13a-30a, 32c), 379 (#1-3), 780 (#95-100), 844 (#71a-74a)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
Obje	ctive 2.2: Evaluate and analyze functions.	Found throughout text. See, for example: 189-202, 203-214, 215-222, 223-232, 233-241, 242-251, 254-256, 257 (#4-22), 259 (#37-46, 48-49), 264-274, 275-288, 298-312, 336-344, 345-353, 384-394, 395-404, 483-493, 494-504		
a.	Find the value of a function at a given point.	192 (Example 3), 198 (#25-42), 199 (#43-44), 203 (Example 1b), 210 (#5-8), 214 (#111-114), 218 (Example 2), 220 (#29-36), 232 (#83-84), 234 (Example 2), 235 (Example 4c), 238 (#13-24), 239 (#43-46), 240 (#60b, 61d, 62b), 241 (#68), 250 (#69-74), 254 (#39-42, 49a, 49c), 257 (#4-5), 259 (#37), 384 (Example 1), 388 (Example 6), 392 (#1-6, 27-32), 395 (Example 1), 396 (Example 2), 402 (#17-22), 403 (#61-64)		
b.	Compose functions when possible.	235, 236 (Example 5), 237 (Example 7a), 238 (#31-34), 239 (#35-42, 45-46), 240 (#63c), 241 (#64, 65a, 66a, 67, 68c), 256 (#109-110, 114), 257 (#17e-17f, 18e-18f), 259 (#44-45), 274 (#103- 104), 404 (#107-108)		
c.	Add, subtract, multiply, and divide functions.	233-234, 238 (#1-30), 239 (#43- 44, 56a, 57a, 58a, 59), 240 (#60a, 61b), 256 (#107-108, 113a), 257 (#17a-17d, 18a-18d), 259 (#42- 43), 274 (#99-102), 404 (#103- 106)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries
d.	Determine whether or not a function has an inverse, and find the inverse when it exists.	242-251, 256 (#115-128), 257 (#19-21), 259 (#46), 344 (#59-60), 374 (#89-92), 568 (#97-100), 814 (#125-128)		
e.	Identify the domain and range of a function resulting from the combination or composition of functions.	234 (Example 3), 236 (Example 5), 238 (#5-12), 239 (#35-42), 256 (#107-110), 259 (#42-45)		
_	etive 2.3: Define and graph exponential functions and em to model problems in mathematical and real-world exts.	384-394, 397 (Example 5a), 423- 426, 430 (#7-20), 431 (#21-36), 432 (#37-46), 434 (#66), 437, 438 (#39-40), 440 (#137-138, 141, 143-148), 441 (#5-7, 27-28)		
a.	Define exponential functions as functions of the form $y = ab_x, b > 0, b \neq 1$.	Opportunities to address this standard can be found on the following pages: 384-387		
b.	Model problems of growth and decay using exponential functions.	389-391, 393 (#53-68), 394 (#69-70), 424-426, 430 (#7-20), 431 (#21-30, 35-36), 432 (#37-42, 43b, 44b, 45-46), 437 (#35-36, 38), 439 (#135), 440 (#145-148), 441 (#27-28), 443 (#40-42)		
c.	Graph exponential functions.	385, 387, 388 (Example 7), 392 (#11-16, 23-26), 393 (#33-44, 64a, 67c, 68c), 394 (#69a, 70a, 77), 397 (Example 5a), 435 (#89-92), 437 (#15-22, 31-34, 38a), 438 (#40c), 441 (#5-7), 482 (#117-120), 748 (#103-104)		

Objective 2.4: Define and graph logarithmic functions and use them to solve problems in mathematics and real-world contexts.		395-404, 423, 429, 433 (#51-58), 444 (#59-63, 66), 438 (#45-48, 53- 70), 440 (#151-152), 441 (#9-11, 29)	
a.	Relate logarithmic and exponential functions.	395, 397 (Example 5), 398, 402 (Vocabulary #1, #1-16), 403 (#45- 60), 438 (#41-44), 438 (#41-48)	
b.	Simplify logarithmic expressions.	396 (Example 3), 400 (Example 9), 402 (#27-30), 406 (Example 4), 407 (Example 6), 409 (#23- 38), 410 (#61-78, 81), 438 (#75- 78, 87-94), 441 (#18-20), 443 (#30), 493 (#93-96)	
c.	Convert logarithms between bases.	405, 409 (#1-8), 411 (#95-100), 422 (#135-138), 438 (#71-74), 441 (#12-14), 443 (#26-28)	
d.	Solve exponential and logarithmic equations.	396 (Example 4), 403 (#79-86), 412-422, 438 (#49-52), 439 (#97- 136), 441 (#21-26), 443 (#31-36), 504 (#89-98), 723 (#61-66), 772 (#79-82)	
e.	Graph logarithmic functions.	397 (Examples 5-6), 398, 403 (#69-78), 404 (#88b, 89a), 438 (#65-68), 441 (#9-11), 482 (#121- 124), 748 (#105-106)	
f.	Solve problems involving growth and decay.	423-426, 428, 430 (#7-20), 431 (#21-30, 35-36), 432 (#37-46), 433 (#49-50), 434 (#63-65), 440 (#145- 148, 150), 441 (#29), 443 (#41-43)	

Percentage of coverage in the student and teacher edition for Standard III:		Percentage of coverage not in student or teacher edition, but covered in the ancillary material for Standard III:%		
		Coverage in Student Edition(SE) and Teacher Edition (TE) (pg #'s, etc.) 203-214, 215-222, 223-232, 254 (#39-48), 255 (#59-106), 257 (#4-16), 259 (#37-41), 264-274, 275-288, 336-344, 345-353, 483-493, 494-504	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
b.	Graph the absolute value, quadratic, radical, sine, and cosine functions.	80, 83 (Example 7), 86 (#7-8), 87 (#27-28, 31-36, 39-40, 43-48), 97 (#111-112), 220 (#13-16, 21-24), 226 (Example 3), 230 (#19c-20c, 23c-28c, 31c-34c, 37c-42c), 231 (#67a), 255 (#81, 83-84, 93c-97c, 100c-102c, 105c-106c), 257 (#9a-10a, 15c-16c), 258 (#12-13), 264-267, 268 (Example 4), 270 (#9-28), 271 (#29-36, 57-64), 272 (#75c), 273 (#85a, 86c, 87a), 274 (#88c), 326 (#1-14, 19d), 366 (#99-102), 483-488, 491 (#27-62, 71-72), 492 (#73c-75c, 78c), 493 (#79c-80c), 528 (#89-98), 529 (#100a), 531 (#12), 543 (#121, 124)		

Objectives & Indicators		Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
c.	Graph functions using transformations of parent functions.	223-232, 255 (#93c-106c), 257 (#14c-15c), 288 (#117-122), 459 (#111-114), 485-488		
d.	Write an equation of a parabola in the form $y = a(x_h)^2 + k$ when given a graph or an equation.	268 (Example 4), 271 (#29-42), 326 (#3-16), 327 (#25-30), 330 (#3)		

Овје	CTIVES & INDICATORS	Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries
Object angles	etive 3.2: Determine radian and degree measures for s.	448-452, 456 (#1-4, 13-20), 457 (#21-30, 39-64), 458 (#65-72), 465 (Example 8), 468 (#51-56), 469 (#63), 506 (Example 1), 508, 511 (#1-16, 19-34), 515 (Example 1), 516 (Example 4), 517 (Example 5), 521 (#1-10, 22), 522 (#23c, 24-25, 28, 30b-31b, 32c, 33), 523 (#35-36), 527 (#1-2, 3c-10c, 11-26), 529 (#111-124), 531 (#1b-1c, 8-9, 19), 561 (#85-89), 608 (#59-64)		
a.	Convert angle measurements between radians and degrees.	452, 457 (#45-64)		
b.	Find angle measures in degrees and radians using inverse trigonometric functions, including exact values for special triangles.	506 (Example 1), 508, 511 (#1- 16, 19-34), 529 (#111-124), 608 (#59-64)		

Objective 3.3: Determine trigonometric measurements using appropriate techniques, tools, and formulas.		Coverage in Student Edition (SE) and Teacher Edition (TE) (pg #'s, etc.) 448-459, 460-470, 471-482, 505- 514, 515-525, 527-528, 529 (#111- 124, 129-140), 531 (#1-11, 14-17, 19-20)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries,
b.	Determine the exact values of the sine, cosine, and tangent functions for the special angles of the unit circle using reference angles.	477 (Example 8), 480 (#87-94), 528 (#85-88)		
c.	Find the length of an arc using radian measure.	453, 458 (#73-76, 81-82), 527 (#27-28)		
d.	Find the area of a sector in a circle using radian measure.	455, 458 (#77-80), 459 (#92-93), 527 (#31-32), 531 (#3), 650 (#40)		

STANDARD IV: Students will understand concepts from probability and statistics and apply statistical methods to solve problems.				
Percentage of coverage in the student and teacher edition for Standard IV:		Percentage of coverage not in student or teacher edition, but covered in the ancillary material for Standard IV:%		
		Coverage in Student Edition(SE) and Teacher Edition (TE) (pg #'s, etc.)	Coverage in Ancillary Material (titles, pg #'s, etc.)	Not covered in TE, SE or ancillaries.
		863-875, 879 (#117-120), 880 (#121-124), 881 (#16-18), 883 (#37)		
a.	Distinguish between permutations and combinations and identify situations in which each is appropriate.	855-859, 861 (#37-40, 47-58), 862 (#59-60, 65-67), 879 (#113-116), 883 (#36)		
b.	Calculate probabilities using permutations and combinations to count events.	866 (Example 5), 871 (#21-24), 873 (#41-48), 879 (#117-118), 880 (#122, 124), 881 (#16-17)		
c.	Compute conditional and unconditional probabilities in various ways, including by definitions, the general multiplication rule, and probability trees.	864-870, 871 (#7-24), 872 (#25- 34, 35b-35c, 36), 873 (#37-49), 874 (#50-55), 875 (#56a), 879 (#117-120), 880 (#121-124), 881 (#16-18), 883 (#37)		
	Define simple discrete random variables.	Not addressed in this text.		
	tive 4.2: Use percentiles and measures of variability to ze data.	Not addressed in this text.		
anary.	I	Not addressed in this text.		
b.	Compare the effectiveness of different measures of spread, including the range, standard deviation, and interquartile range in specific situations.	Not addressed in this text.		
c.	Use percentiles to summarize the distribution of a numerical variable.	Not addressed in this text.		
d.	Use histograms to obtain percentiles.	Not addressed in this text.		